

**Chapter 8 Quiz #2****Perform the indicated operation and simplify.**

1. 
$$\frac{4x^3y^5}{3x^2y^4} \cdot \frac{9x^3y^2}{12xy}$$

2. 
$$\frac{x^2 + 5x + 6}{3x} \div (x + 3)$$

3. 
$$\frac{5x}{x^2 - x - 12} + \frac{3x}{x - 4}$$

4. 
$$\frac{7x^2}{9x^2 - 25} - \frac{2}{6x + 10}$$

**Simplify.**

5. 
$$\frac{\frac{7}{x} + 11}{\frac{2}{3x} - 2}$$

6. 
$$\frac{25 - \frac{1}{x^2}}{\frac{1}{5x^2 - x}}$$

7. 
$$\frac{\frac{3}{x^2 - 9} - \frac{2}{x + 3}}{\frac{1}{6x - 18}}$$

8. 
$$\frac{\frac{3x}{x - 3} + \frac{6}{x + 2}}{\frac{3}{x^2 - x - 6}}$$

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**Solve the equation and check the solution.**

9.  $\frac{3}{x+1} = \frac{3}{x^2+x}$

10.  $\frac{3}{2x} - \frac{1}{x-5} = 1$